meap

Michigan Educational Assessment Program

Size and Distance Investigation Journal

Grade 5

Name _____

School _____

Winter 2000

Our Question

The question we are going to investigate is:

What I Already Know

Here are some things I already know about the question:

What I Think Will Happen — My Hypothesis

I think the circles will appear:

Materials That We Will Use (for each group of 4 students)

1 sheet of white paper with 2cm diameter black circle, labeled "circle 1."
1 sheet of white paper with 2cm diameter black circle, labeled "circle 2."
1 sheet of white paper with 3cm diameter black circle, labeled "circle 3."
metric ruler
masking tape
Student Investigation Journal (for each student)

Procedures

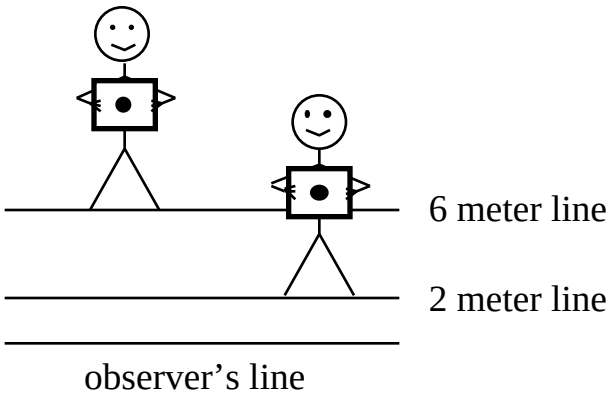
Part 1

1. Select an observer and have that student stand on the observer's line.

2. Have a member of the group hold circle 1 (a 2 cm circle) on the 2 meter line of the distance layout.

3. Have another member of the group hold circle 2 (a 2 cm circle) on the 6 meter line of the distance layout. The observer now compares how the sizes of circle 1 and circle 2 look and reports orally to the group. Record what the observer said for circle 1 and circle 2 on the line for that observer in Table 1.

4. Repeat steps 1, 2 and 3 until all students in the group have had a chance to be the observer for Part 1.

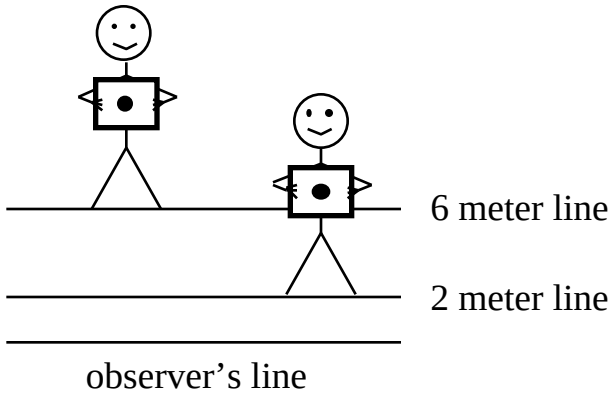


Part 2

5. Select a student as an observer and have this student stand on the observer's line. Have one student in the group hold circle 1 while standing at the 2 meter line. Have another member of the group hold circle 3 (a 3 cm circle) while standing at the 6 meter line. The observer compares the sizes of circles 1 and 3 and reports orally to the group. Record this information in Table 2 on the line corresponding to this observer's number.

6. Have the student holding circle 3 move forward or backward until circle 1 and circle 3 appear to be the same size to the observer. Record in Table 2 the distance that the person holding circle 3 is from the observer's line when the observer states that circle 1 and circle 3 appear to be the same size.

7. Repeat steps 5 and 6 until all students in the group have had a chance to be the observer for Part 2.



My Observations (Tables)

Table 1

Comparison of Circle 1 and 2		
Observer Number	**Circle 1 at 2 meters distance**	**Circle 2 at 6 meters distance**
1		
2		
3		
4		

Table 2

Comparison of Circle 1 and 3			
Observer Number	**Circle 1 at 2 meters distance**	**Circle 3 at 6 meters distance**	**Distance from observer's line at which both circles appear to be the same size to the observer**
1			
2			
3			
4			

Summary of My Results

The summary of my results:

My Answer to the Question

My answer to the question is:

My Reasons for My Answer

I think this is the answer because I observed:

Some Possible Errors

These are the things that might have caused errors in my investigation: